



SIGMA-ALDRICH

Material Safety Data Sheet

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Version 1.40

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Section 1 - Product and Company Information

Product Name: 5-Bromo-2'-deoxyuridine, SigmaUltra, minimum 99%
Product Number: B9285
Brand: Sigma Chemical
Company: Sigma-Aldrich
Street Address: 3050 Spruce Street
City, State, Zip, Country: SAINT LOUIS, MO 63103 US
Technical Phone: 314 771 5765
Fax: 800 325 5052
Emergency Phone: 414 273 3850 Ext. 5996

Section 2 - Composition/Information on Ingredient

Table with 5 columns: Substance Name, CAS #, SARA 313, EC no, Annex 1 Index Number. Row 1: (+)-5-BROMO-2'-DEOXYURIDINE, 59-14-3, No, 200-415-9

Formula: C9H11BrN2O5
Synonyms: BDU, 5-Bdu, Bromodeoxyuridine, 5-Bromodeoxyuridine, 5-Bromodesoxyuridine, 5-Bromo-2'-deoxyuridine, Bromouracil deoxyriboside, 5-Bromouracil deoxyriboside, 5-Bromouracil-2'-deoxyriboside, Broxuridine, Brudr, BU DR, 5-Budr

Section 3 - Hazards Identification

Emergency Overview
Caution: Avoid contact and inhalation. Target organ(s): Immune system.

HMIS Rating
Health: 1\* Flammability: 0 Reactivity: 0

NFPA Rating
Health: 1 Flammability: 0 Reactivity: 0

\*additional chronic hazards present.
For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

Dermal Exposure
In case of contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A
Extinguishing Media: Suitable
Water spray, Carbon dioxide, dry chemical powder, or appropriate foam.
Firefighting Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Methods for Cleaning Up
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
Storage: Suitable
Keep tightly closed. Store at -20°C

Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment
Respiratory: Wear dust mask.
Hand: Protective gloves.
Eye: Chemical safety goggles.

General Hygiene Measures
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance: Physical State: Solid, Color: White, Form: Powder

Molecular Weight: 307.11 AMU

pH N/A  
BP/BP Range N/A  
MP/MP Range 190 °C  
Freezing Point N/A  
Vapor Pressure N/A  
Vapor Density N/A  
Saturated Vapor Conc. N/A  
SG/Density N/A  
Bulk Density N/A  
Odor Threshold N/A  
Volatile% N/A  
VOC Content N/A  
Water Content N/A  
Solvent Content N/A  
Evaporation Rate N/A  
Viscosity N/A  
Partition Coefficient N/A  
Decomposition Temp. N/A  
Flash Point °F N/A  
Flash Point °C N/A  
Explosion Limits N/A

Flammability N/A  
Autoignition Temp N/A  
Optical Rotation Degree of Rotation: Solvent:H2O10 g/l  
+28 - +23 (+/-1)  
Solubility N/A

N/A = not available

## Section 10 - Stability and Reactivity

Stability  
Stable  
Stable.  
Materials to Avoid  
Strong oxidizing agents.

Hazardous Decomposition Products  
Hazardous Decomposition Products  
Carbon monoxide, Carbon dioxide, Nitrogen oxides, Hydrogen bromide gas.

Hazardous Polymerization  
Hazardous Polymerization  
Will not occur.

## Section 11 - Toxicological Information

Route of Exposure  
Skin Contact  
May cause skin irritation.  
Skin Absorption  
May be harmful if absorbed through the skin.  
Eye Contact  
May cause eye irritation.  
Inhalation  
May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion  
May be harmful if swallowed.

Target Organ(s) or System(s)  
Immune system.

Signs and Symptoms of Exposure  
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

RTECS Number: YU7350000

### Toxicity Data

Oral - Rat: 8400 mg/kg (LD50)

Intraperitoneal - Rat: 1500 MG/KG (LD50)

Subcutaneous - Rat: 3900 MG/KG (LD50)

Remarks: Behavioral:Somnolence (general depressed activity).  
Cardiac:Pulse rate.  
Lungs, Thorax, or Respiration:Respiratory depression.

Intravenous - Rat: 2320 MG/KG (LD50)

Remarks: Vascular:Other changes.

Oral - Mouse: 9100 mg/kg (LD50)

Remarks: Behavioral:Muscle weakness.  
Blood:Changes in spleen.  
Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

Intraperitoneal - Mouse: 3050 MG/KG (LD50)

Remarks: Behavioral:Somnolence (general depressed activity).  
Cardiac:Pulse rate.  
Lungs, Thorax, or Respiration:Respiratory depression.

Subcutaneous - Mouse: 3500 MG/KG (LD50)

Remarks: Behavioral:Somnolence (general depressed activity).  
Cardiac:Pulse rate.  
Lungs, Thorax, or Respiration:Respiratory depression.

Intravenous - Mouse: 2500 MG/KG (LD50)

Remarks: Behavioral:Somnolence (general depressed activity).  
Cardiac:Pulse rate.  
Lungs, Thorax, or Respiration:Respiratory depression.

Oral - Quail: > 100 mg/kg (LD50)

### Chronic Exposure - Carcinogen

Rat - Subcutaneous: 16 MG/KG

Result: Tumorigenic:Carcinogenic by RTECS criteria. Endocrine:Thyroid tumors. Tumorigenic Effects: Testicular tumors.

### Chronic Exposure - Teratogen

Species	Dose	Route of Application	Exposure Time
			Result:Laboratory experiments have shown teratogenic effects.
Rat	250 MG/KG	Intraperitoneal	(13D PREG)
			Result:Effects on Embryo or Fetus: Cytological changes (including somatic cell genetic material).
Rat	200 MG/KG	Intraperitoneal	(13D PREG)
			Result:Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system.
Mouse	500 MG/KG	Intraperitoneal	(11D PREG)
			Result:Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Respiratory system.
Mouse	300 MG/KG	Intraperitoneal	(10D PREG)
			Result:Specific Developmental Abnormalities: Craniofacial (including nose and tongue). Specific Developmental Abnormalities: Musculoskeletal system.
Mouse	200 MG/KG	Intraperitoneal	(8D PREG)
			Result:Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Eye, ear.